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LETTER REGARDING FEASIBILITY STUDY REPORT OPERABLE UNIT 2 (OU 2) INIROP FRIDLEY MN

8/30/1995

MINNESOTA POLLUTION CONTROL AGENCY

# Minnesota Pollution Control Agency

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

August 30, 1995

Mr. David Cabiness, Code 1862
Commanding Officer
Southern Division
Naval Facilities Engineering Command
PO Box 190010
North Charleston, SC 29419-9010

RE: Naval Industrial Reserve Ordnance Plant

Dear Mr. Cabiness:

The U.S. Navy (Navy), the Minnesota Pollution Control Agency (MPCA), and the U.S. Environmental Protection Agency (EPA) met on August 3, 1995, to discuss MPCA and EPA staff responses to the Feasibility Study Report for Operable Unit 2 (OU2). The MPCA staff rejected the OU2 FS Report in the July 20, 1995, letter (Letter). In the meeting many issues surfaced regarding the present and future status of the NIROP Site. After further consideration of all of the issues impacting the present and future status of the Site, the MPCA staff has determined that the best course of action for the Site is to proceed in a new, more holistic approach to investigating and remediating the Site.

Pursuant to the reasons identified in Attachment 1 to this letter, this new approach involves completing the OU2 FS Report pursuant to Attachment 2 to this letter; transferring much of the OU2 FS and some follow-up OU2 RI work to OU3 pursuant to Attachment 3 of this letter; and proceeding with the investigation and cleanup of the Site by thinking of OU2 as a potential subarea of OU3. The new approach involves MPCA staff modification of the Letter as explained in Attachments 1, 2, and 3.

The Navy shall complete the work in Attachment 2 to complete the OU2 FS. The Navy shall carry forward the "OU2 FS Report alternatives" to the OU3 FS. Alternative remedies identified in the OU3 FS Report may address remediation of contamination in "OU2."

The Navy shall use the carcinogenic polyaromatic hydrocarbon (cPAHs) cleanup levels identified in Attachment 4 of this letter for the NIROP Site under the following three land use scenarios: unrestricted use (5 parts per million (ppm) cPAHs); industrial use without a

vegetated cover (current site conditions) (12 ppm cPAHs); and industrial use with a vegetated cover (20 ppm cPAHs).

If you have any questions regarding this letter, please contact David Douglas of my staff at (612) 296-7818.

Sincerely,

James L. Warner

James L. Warner, P.E.
Division Manager
Ground Water and Solid Waste Division

JLW:lma

cc: Sidney Allison, Navy, Southern Division
Mark Briggs, RMT, Inc.
Thomas Bloom, US Environmental Protection Agency

Attachment 1

Reasons for New Approach to
the Investigation and Cleanup
of the NIROP Site

The following are reasons for the new approach to the investigation and cleanup of the NIROP Site:

1). The Navy has agreed to accept soil cleanup numbers based on the MPCA Soil leaching Model for contaminated soil located in the unsaturated zone at the August 3, 1995 meeting of the MPCA, EPA, and Navy staff at the offices of the MPCA.

2.) The Navy is committed to completing an RI/FS for OU3, including the investigation for the presence of DNAPL at the Site.

3.) The Navy is committed to conducting a 3-dimensional acoustic imaging of the main building at the Site as part of the OU3 RI.

4.) The MPCA staff has requested and hereby reiterates the request that the Navy conduct a 3-dimensional acoustic imaging study of OU2. The success of combining the two operable units relies on the 3-dimensional acoustic imaging of both OU2 and OU3. The MPCA staff feel that the use of this tool over the entire site, although more costly up front, will ensure that the quality of data concerning the geological picture at the Site is adequate to insure the success of the OU3 RI/FS.

5.) The MPCA staff continues to reject the conclusion of the draft OU2 FS Report that selects institutional control as the sole remedy for contaminated soil at OU2. The OU2 RI has indicated that contaminated soil exists at the site at or above levels of concern. The MPCA staff has worked with the Navy to scope and limit the technologies that may be evaluated in the FS to remediate the soil. Treatment technologies are available that can remediate the soil at costs that the MPCA staff feels are not prohibitive. Institutional controls may be necessary as a component of a remedy for a given operable unit at the Site, but are unacceptable as a total remedy for Site soils.

6.) The OU2 RI indicates that contaminated soil exists above the MPCA cleanup levels at the Site (using the MPCA Soil Leaching Model) and that soil remediation is required. A much higher mass of solvent probably exists as DNAPL at the Site, including OU2. At the present time the Navy is planning to investigate DNAPL for OU3.

7.) The Navy recently committed to completion of a Remedial Investigation/Feasibility Study (RI/FS) Workplan for OU3 that will include investigation for DNAPL. This was not a commitment that MPCA and EPA were able to obtain from the Navy in the past.

8.) Until the OU3 RI has been completed, the full magnitude and extent of solvent contamination at the Site remains unknown. In addition, the relationship of any DNAPL as a source to the ground water contamination at the Site is not fully understood.

9.) The uncertainty concerning the magnitude and extent of potential sources of solvent at the Site in the soil and as DNAPL and the uncertainty concerning the relative contribution of these potential sources to ground water contamination (and overall Site risk) makes the proper selection of a remedy for OU2 soils inappropriate at this time.

For example, DNAPL is likely present in the "North 40" area where barrels were disposed of in trenches. Sampling did not occur below the water table during the OU2 RI (or at any other time). As a result, the magnitude and extent of any DNAPL in the North 40 is not known. If DNAPL is present in the North 40, a remedy different from the remedies being evaluated in the draft OU2 FS Report may be appropriate.

10.) A great deal of uncertainty exists concerning the geology (stratigraphy) beneath the Site, including under the 53-acre main building. No data is currently available concerning the geology, hydrogeology and contamination under the building. The Navy's planned use of 3-Dimensional Acoustic Imaging techniques in the OU3 investigation will define the geology beneath the building. Its use at OU2 when combined with the data for OU3 will define the geology for the Site as a whole. This data will lead to more informed decisions regarding the investigation, remedy selection, and remedial design, as well as improve the chances for a successful remedy.

11.) Selection of a global remedy for both OU2 and OU3, once the OU3 RI is completed, should lead to a much more cost effective, holistic remedy.

12.) A cost savings will be realized by forgoing additional work on OU2 FS (as originally planned) that is partly based on incomplete site-wide information. Much of the work done to complete the FS for OU2 likely will be superseded by information gathered by the acoustic study and by the proposed excavation of possible barrels currently planned.

13.) The MPCA staff are now aware of innovative remedial technologies for TCE contamination recently demonstrated at the Savannah River Site that should be considered at NIROP. The MPCA staff became aware of these technologies during a site tour of the Savannah River Site in late June, 1995. These technologies were not considered in the OU2 FS due to lack of adequate staff knowledge of the technologies when the FS was scoped in late 1994. Applied to a combined OU2/OU3 remediation at NIROP, they could lead to a different remedy for the combined operable units than is presently evaluated in the draft OU2 FS Report.

Attachment 2

Work Needed to be Completed
for the Operable Unit 2
Feasibility Study

The Navy shall complete only the work identified in this attachment to finalize the OU2 FS. In other words, the Navy shall disregard all other modifications in Attachment 1 to the July 20, 1995 letter from the MPCA staff to the Navy regarding Operable Unit 2.

The Navy shall complete the following items in the MPCA staff letter of July 20, 1995:

1). Items 16 and 41 as follows:

The Navy shall modify MPCA staff modifications to Items 16 and 41 by preparing a map that indicates the location and extent of all solvent contaminated soil identified in the OU2 that exceeds the cleanup numbers generated from the MPCA Soil Leaching Model. The map shall also include the location of areas where barrels where removed from the site, including the number of barrels recovered, when the barrels were removed and an estimate of how much solvent was released at each site. The Navy shall also calculate the volume of contaminated soil which exceeds the cleanup numbers.

2). Item 52 as follows:

The Navy shall determine the magnitude and extent (volume in cubic yards) of cPAH - contaminated soil identified in the OU2 RI using the risk-based preliminary remedial goals (PRGs) developed by the MPCA staff as explained in Attachment 4. Using these PRGs, the Navy shall produce the maps showing the location of areas which exceed the PRGs.

Attachment 3

Rationale and Direction for
the Remedial Investigation and Feasibility Study
for Operable Unit 3

The Navy shall complete the RI/FS for OU3 as follows:

1.) The Navy shall incorporate OU2 RI data in the OU3 RI Report.

2.) The Navy shall evaluate the contribution of OU2 and OU3 contaminant sources to the ground water contamination at the Site in the OU3 RI Report, including OU2 VOC and cPAH data from the OU2 RI and all new information collected in the OU3 RI concerning contamination beneath the building, including DNAPLs.

3.) In the OU3 RI, the Navy shall complete a risk assessment for OU3 using OU2 and OU3 data. The risk assessment shall evaluate the cumulative risk of all contaminants of concern at these two operable units. The Navy shall determine the risk from contaminants of concern identified in the OU2 RI and any others identified by the OU3 RI for both an unrestricted and an industrial land use scenario. If the Navy can provide compelling evidence that the land use will continue to be industrial at NIROP, the MPCA staff may approve the Navy completing the risk assessment using only the industrial land use scenario.

4.) If DNAPL is found in OU2 and/or OU3, the Navy shall: 1) produce an OU3 FS that includes DNAPL as a source of ground water contamination; 2) determine, in the OU3 FS, the relative short- and long-term time frames and costs of operating the existing OU1 ground water pump and treatment system to reach Site ground water cleanup goals listed in the ROD compared to the short- and long-term costs of remediation of any OU2 and OU3 DNAPL source areas; and 3) evaluate combined remedial measures that will address both OU2 and OU3 contamination , including DNAPL.

5.) The Navy shall complete the following items identified in Attachment 1 of the MPCA staff letter of July 20, 1995 to the Navy regarding the OU2 FS Report and incorporate the results of this work, including the MPCA staff rationale and direction, in the OU3 RI/FS: 2, 3, 5, 11, 13-20, 22-23, 25, 27-35, 38, 43-46, and 48-51.